SAFETY PRACTICES AROUND SHUTTLE CARS AND SCOOPS IN UNDERGROUND COAL MINES

This initiative has been developed to make miners aware of the hazards associated with operating and working around shuttle cars and scoops. Please remember, you can prevent these types of accidents and fatalities.

ACCIDENT TRENDS

Nearly 800 miners have been injured and 16 killed in accidents from 01/2000-09/2010 involving shuttle cars and scoops in underground coal mines.

Best Practices for Shuttle Car and Scoop Operators

ALWAYS

- Pay attention to your surroundings – especially in areas of limited visibility.

ALWAYS

- Make sure you are aware of other mobile equipment operating in your area.

Best Practices for Shuttle Car and Scoop Operators

ALWAYS

- Make sure that all persons are in the clear before tramming mobile equipment.

ALWAYS sound audible warning device:

- Before tramming.
- Before traveling through check curtains.
- Before changing direction of travel.
- When visibility is obstructed at tight turns.

Best Practices for Shuttle Car and Scoop Operators

ALWAYS

- Keep equipment decks clean of accumulated coal, mud, grease, etc.
- Lubricate operator controls, including brake and accelerator, to prevent sticking.
- Ensure that the equipment is in good operating condition.

Best Practices for Shuttle Car and Scoop Operators

When traveling, ALWAYS

- Keep your hands and feet in the operator's compartment.
- Face in the direction of travel.
- Use speeds consistent with roadway conditions.
- Use lights in direction of travel.

Best Practices for Miners

ALWAYS

- Pay attention to your surroundings.
- Wear reflective clothing.
- Make sure that mobile equipment operators know where you are by signaling or other means of communication.

Best Practices for Miners

ALWAYS

- Walk behind moving equipment when traveling in the same entry.
- Make yourself visible to equipment operators underground and avoid standing or stooping near blind spots or on the opposite side of brattice cloth where a driver may not see you.

Best Practices for Miners

NEVER

- Put yourself in an area or location where an equipment operator can’t see you.
- Assume that an equipment operator can see you.
- Assume that an equipment operator will stop for you.

Best Practices for Mine Owners, Superintendents, or Supervisors

ALWAYS

- Use approved transparent check curtains or fly pads for better visibility.
- Schedule survey time when the section is not in production.

Best Practices for Mine Owners, Superintendents, or Supervisors

ALWAYS

Have the section foremen examine the working sections prior to any work to determine the safest route for miners on foot to prevent interaction with mobile equipment and communicate their findings to the miners.

Best Practices for Mine Owners, Superintendents, or Supervisors

ALWAYS

- Provide sufficient clearance at dumping points (at least 24 inches) between the rib and the operator's compartment to allow the operator to enter or exit the equipment safely.

ALWAYS

- Ensure operator visibility by not overloading haulage equipment.

NEVER

Obstruct visibility by overloading haulage equipment.

- Unloaded

Loaded

Best Practices for Mine Owners, Superintendents, and Supervisors

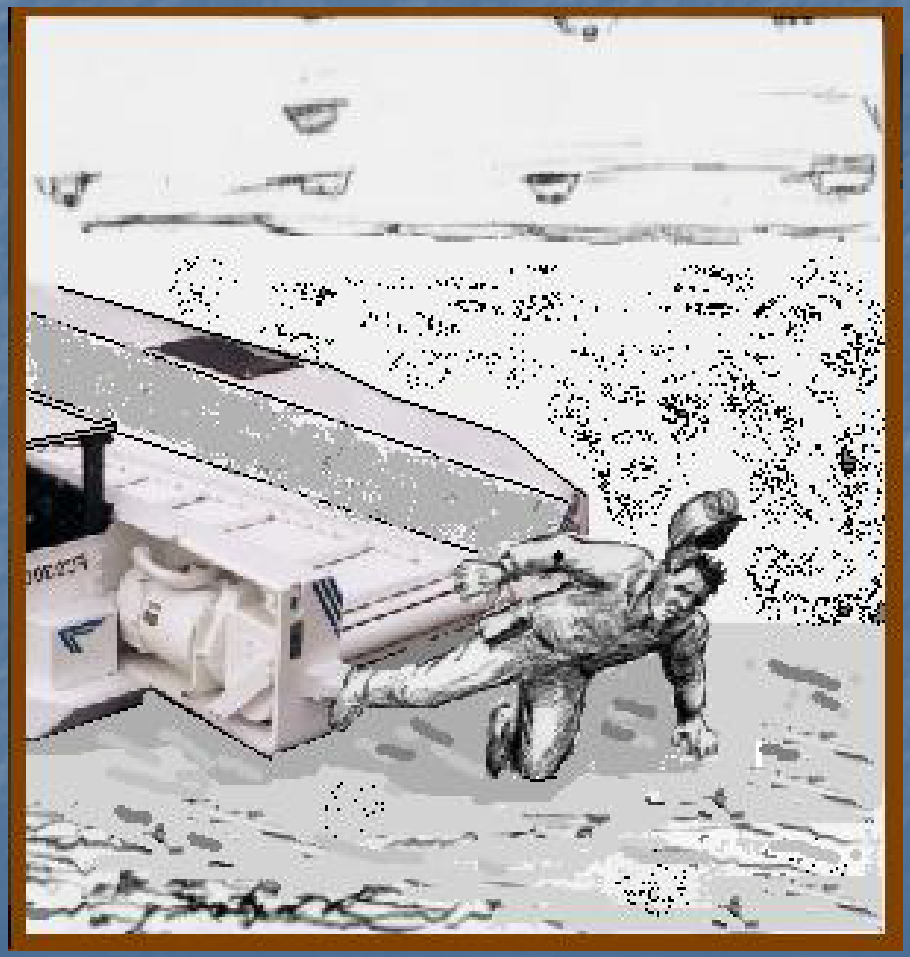
- Install proximity detection systems on all mobile equipment.
- Provide small permissible strobe lights for miners on foot.

Proximity detection systems are newly developed technology that can detect the presence of miners within a certain distance. These systems can be programmed to send a warning signal and stop the equipment on which it's installed when a certain area close to the system is breached. In other words, if a miner approaches the machinery it is installed upon, the system will send a warning. If the miner gets closer, the equipment will shut down.

TO THE TRAINER

- The following slides depict examples of accidents discussed in this presentation.
- You can choose to:
  - 1. Discuss best practices to prevent accidents.
  - 2. Conduct quiz on best practices to prevent accidents.
  - 3. Identify best practices by inserting the "best practice" directly on the slide.

Fatal Accident



In July 2010, a section electrician was fatally injured when he was run over by a shuttle car. The miner was walking in an entry toward the face when he was struck by the shuttle car.

Fatal Accident

In February 2008, a surveyor with 8 years of total experience was fatally injured while surveying in an active underground mining section. The victim was struck by a loaded shuttle car as it traveled through a run-through check curtain.

Fatal Accident

In May 2008, a general inside laborer with four weeks experience was fatally injured when he was struck by a battery powered scoop. The victim was assisting two other miners repair a haul road. The victim was traveling on foot and was being followed by the scoop and a diesel road grader. While in route, the scoop operator struck the victim causing fatal injuries.

Injury Accident: Amputation

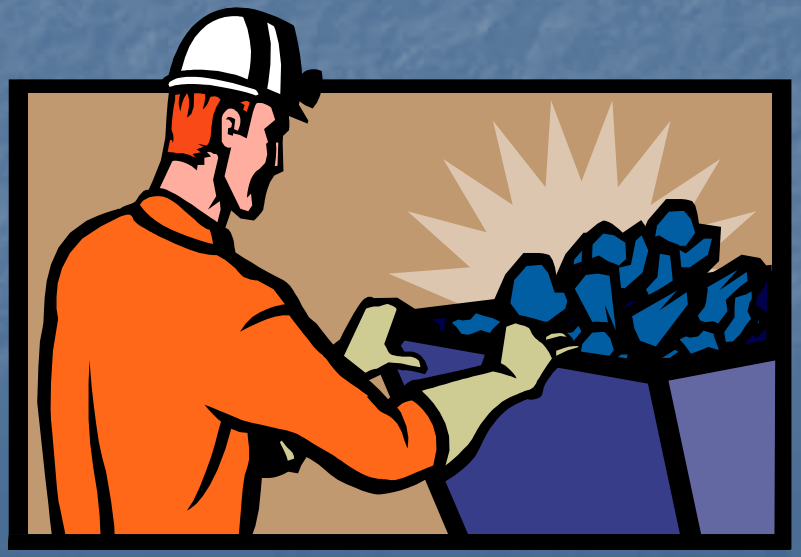
A miner was holding a grab handle while operating a shuttle car that struck the rib. His hand was caught between the grab handle and the rib resulting in the amputation of his fingers.

Injury Accident – Stuck Operator Controls

As the miner was tramming the shuttle car, the tram pedal stuck and the shuttle car hit the rib causing the operator to hit his head on the cab of the shuttle car, resulting in the operator jamming his neck.

TO THE TRAINER

- You may wish to use this PowerPoint to supplement your mine's current training programs or to tailor a program to meet training needs at your underground coal mine.



TO THE TRAINER

- This presentation covers information through September 2010. Since regulations, policy, and mining technology can change, be sure to check for information which could supersede this material.

- For additional information, visit MSHA's website http://www.msha.gov/Safety_Targets/Hit%20by%20UG%20Equipment/HitbyUGEquipment.asp